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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,074	12/16/2003	Katumasa Hosi	Q78692	4260

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EXAMINER	
BUTLER, PATRICK NEAL	

ART UNIT	PAPER NUMBER
1791	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/736,074	HOSI ET AL.	
	Examiner	Art Unit	
	Patrick Butler	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-12* is/are pending in the application.

4a) Of the above claim(s) *1,2 and 5-8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3,4 and 10-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/813,945.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 4, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (International Publication No. WO 91/12755) in view of Inaba (Japanese Patent Publication No. JP 63-89326).

With respect to Claim 3, Lee teaches making a straw with two lengthwise grooves 2 on both sides of a protuberance 6a (a method for producing a straw tube comprising a tube comprising on an outer circumferential wall thereof, a plurality of grooves extending in a longitudinal direction and a convex streak sandwiched by these grooves) (see abstract; page 7, lines 5-12; and fig. 4).

Lee teach forming making a straw with two lengthwise grooves 2 on both sides of a protuberance 6a (see abstract; page 7, lines 5-12; and fig. 4) and a protuberance 6c formed above the surface level of the outer wall (convex streak projects outward from a datum level of the outer circumferential wall) (see fig. 9 and page 7, lines 18-23). Lee does not appear to expressly teach making the protuberance 6a above the level of the outer wall like protuberance 6c.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make protuberance 6a above the level of the outer wall like

protuberance 6c in order to further the purpose of preventing vacuum within the interior of the container (see page 8, lines 13-20).

Lee does not expressly teach the method of loading the tube on a rotating drub, inserting a female rod into the tube, and engaging the grooves of the rod with a male mold.

Inaba teaches loading the straw onto a straw holding drum 22 (a step of loading a tube into a tube loading groove formed on the outer circumferential wall of a rotating drum and extending in an axial direction thereof) (see abstract and fig. 6) shaping a straw with a receiving pin 28 internal to the straw conforming to the desired shape (a step of inserting into said tube a female rod having a plurality of grooves formed at a position corresponding to a surface of said tube exposed from said tube loading grooves) (see abstract and figs. 5) and directing the pin-mounted straw between rotating stopper molds 42, 34 complimentary to the desired shape and internal pin 28 (a step of engaging the grooves of the female rod within the tube and convex streaks of a male mold provided on a male roller, through the tube) (see abstract and figs. 5 and 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Inaba's method of shaping in Lee's method of making a shaped straw in order to form the desired shape with high dimensional accuracy in an automatic process (see Inaba, abstract).

With respect to Claim 4, Lee provides for the desired shape of the straw having two lengthwise grooves 2 on both sides of a protuberance 6a. As combined, Inaba is relied on to teach forming the desired shape with an in internal pin 28 and external

rotating mold 42, 34 complimenting the internal pin to form the desired shape. Thus, the pin and mold would have the claimed shape principally because the desired shape of the formed product is taught by Lee.

With respect to Claim 10, Lee teaches making a straw with two lengthwise grooves 2 on both sides of a protuberance 6a, wherein the grooves do not reach the wall of a hole conforming to the round wall of the straw (each of said grooves is deeper than a surface of the outer circumferential wall of the tube body) (see abstract; page 7, lines 5-12; page 2, lines 8-21; and fig. 4). Lee further teaches a protuberance 6c formed above the surface level of the outer wall (convex streak projects outward from a datum level of the outer circumferential wall) (see fig. 9 and page 7, lines 18-23). Lee does not appear to expressly teach making the protuberance 6a above the level of the outer wall like protuberance 6c.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make protuberance 6a above the level of the outer wall like protuberance 6c in order to further the purpose of preventing vacuum within the interior of the container (see page 8, lines 13-20).

Lee does not appear to explicitly teach that the concave grooves' proportion of the straw are is within the claimed range (e.g., $^1/_3$-$^3/_4$ of the tube).

However, in this regard, Lee teaches partially forming the grooves in order to avoid the ends of the straw being grooved (see page 6, line 4 through page 7, line 3). As such, Lee recognizes that that the concave grooves' proportion of the straw is a result-effective variable. Since that the concave grooves' proportion of the straw is a

result-effective variable, one of ordinary skill in the art would have obviously been motivated to determine the optimum grooved proportion applied in the process of Lee through routine experimentation based upon minimizing difficulty for sucking a carton pack's content and preventing a path in the place of perforation requiring relocation of the groove (see page 6, line 4 through page 7, line 3).

With respect to Claim 12, Lee teaches a step of forming grooves and a projected convex streak, loading a tube, inserting a female rod into the tube, and engaging the grooves of the female rod as previously described. Lee does not appear to expressly teach forming an annular inner tube and combining it with the shaped outermost tube.

Inaba teaches forming an internal and external rod with the external rod shaped (see fig. 14 and 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make and combine an internal rod as taught by Inaba in the process of making an external rod as taught by Lee in order to providing a telescoping straw.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (International Publication No. WO 91/12755) in view of Inaba (Japanese Patent Publication No. JP 63-89326) as applied to Claim 3 above, and further in view of Cornell (US Patent No. 5,975,340).

With respect to Claim 11, Lee teaches making a straw but does not appear to expressly teach heating the tube within the tube loading groove.

Cornell teaches heating a substantially straight straw before reforming (see col. 6, lines 7-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the straw before shaping as taught by Cornell in the process of shaping a straw as taught by Lee in order to facilitate permanent straw reforming.

Response to Arguments

Applicant's arguments filed 03 December 2008 have been fully considered but they are not persuasive.

Applicant argues with respect to the 35 USC § 103(a) rejections. Applicant's arguments appear to be on the grounds that:

1) It would not have been obvious to one of ordinary skill in the art at the time the invention was made to make protuberance 6a above the level of the outer wall like protuberance 6c because holes for air flowing by the protuberances 6a and 6c are formed only when the straw is turned appropriately after perforation of the pack.

The Applicant's arguments are addressed as follows:

1) As acknowledged by Applicant, Lee recognizes that air flows when both protuberances 6a and 6c are used. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further the purpose of preventing vacuum within the interior of the container (see page 8, lines 13-20).

1) Moreover, since Lee recognizes that air flows when both protuberances 6a and 6c are used, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to make protuberance 6a above the level of the outer wall like protuberance since it is obvious to combine equivalents known for the same purpose (see MPEP 2144.06(I)).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. B./
Examiner, Art Unit 1791

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791